

Shil Jan 18, 2017

Work Order ID 154845

154845

Page 1

Thursday, December 22, 2016 10:08:07 AM

Item ID: D3167-1 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Bearpaw
 Start Date: 1/3/2017 Start Qty: 6.00 ***6*** Cust Item ID:
 Required Date: 1/17/2017 Req'd Qty: 6.00 ***6*** Customer:
 Reference:

Approvals: Process Plan: VS Date: 14/12/22 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3167	Rev A1								
120	FLOW WATER JET	0.00							
120									
Waterjet	Memo	0.40							
FLOW CNC Waterjet	Cut Blank as per File D3167-1_BLANK								
130	HAAS CNC VERTICAL MACHINING #1	0.00							
130									
HAAS 1	Memo	0.67							
HAAS CNC vertical machine #1	Note: (2) Bearpaw for (1) Kit 1-Inspect material for defects or damage prior to machining 2-Machine as per Folio FA285 and Dwg D3167 3-Deburr								
140	QC2- Inspect parts off machine FAI/FAIB	0.00							
140									
QC	Memo	0.01							
Quality Control									

⑥ _____ 12/12/22

⑥ ∅ _____ DAS 49 9-89 17/01/10

⑥ ∅ _____ DAS 49 9-89 17/01/10

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : ☐			

Work Order ID 154845***154845***

Page 2

Thursday, December 22, 2016 10:08:07 AM

Item ID: D3167-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Bearpaw

Start Date: 1/3/2017 Start Qty: 6.00

6

Cust Item ID:

Required Date: 1/17/2017 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

QC8- Inspect parts - second check

0.00

150

QC

Memo

0.02

Quality Control

6

d

DAS
45
9-89

17-01-13

151

Identify as per dwg & Stock Location: 51

0.00

151

Packaging

Memo

0.01

Packaging

6

DAS
6
9-89

JAN 16 2017

190

QC21- Final Inspection - Work Order Release

0.00

190

QC

Memo

0.10

Quality Control

DAS
21
9-89

JAN 16 2017

DAS
21
9-89

JAN 16 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
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Picklist Print

Thursday, December 22, 2016 10:08:14 AM

Work Order ID: 154845

154845

Parent Item: D3167-1

D3167-1

Parent Item Name: Bearpaw

Start Date: 1/3/2017

Required Date: 1/17/2017

Start Qty: 6.00

Required Qty: 6.00

Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB10		Purchased	No			120	sf	1,058.400	3.6	21.6			

MUHMWB10

UHMW 1" Black - 48"x120" Tivar Mfg.#52480104

re 12/12/22

Location

Loc Qty

Loc Code

MAT018

1058.4

m135013

14

m135913

244.4

m136290

400

m136453

400

26

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
☐ OTHER : _____					

DART AEROSPACE LTD		Work Order: 154845
Description: Bearpaw		Part Number: D3167-1
Inspection Dwg: D3167	Rev: A1	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Inspection Sheet	Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
A	0.06 x 45°	+0.030/-0.010	0.06 x 45°	✓		vern	mark-OS
B	5.80	+/-0.030	5.792	✓		↓	
C	0.25 x 45°	+/-0.030	0.240 x 45°	✓		↓	
D	R0.25	+/-0.030	0.250	✓		RG	
E	0.200	+/-0.030	0.195	✓		vern	mark-OS
F	0.250	+/-0.010	0.248	✓		micro	mark-OS
G	0.625	+/-0.030	0.627	✓		vern	mark-OS
H	0.375	+/-0.010	0.378	✓		↓	
I	0.950	+0.030/-0.010	0.953	✓		↓	
J	3.21	+/-0.030	3.205	✓			
K	19.00	+/-0.030	19.00	✓		tape	
L	Ø0.260	+0.005/-0.000	0.259	✓		vern	mark-OS
M	Ø0.93	+/-0.030	0.925	✓		↓	
N	0.30	+0.030/-0.000	0.320	✓		↓	
O	0.375	+/-0.030	0.373	✓		↓	
P	7.23	+/-0.030	7.220	✓		↓	
Q	4.54	+/-0.010	4.543	✓		↓	
R	2.00	+/-0.030	2.015	✓		↓	
S	12.000	+/-0.010	12.00	✓		tape	
T	6.000	+/-0.010	5.998	✓		vern	mark-OS
U	23.75	+/-0.030	23.750	✓		tape	

DAS
49

DAS
45

Measured by: 9-89	Audited by: 9-89	Prototype Approval:	N/A
Date: 12/01/10	Date: 17-01-13	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	03.09.22	New Issue	P/O D130-700-011	KJ/RF

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

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Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐				



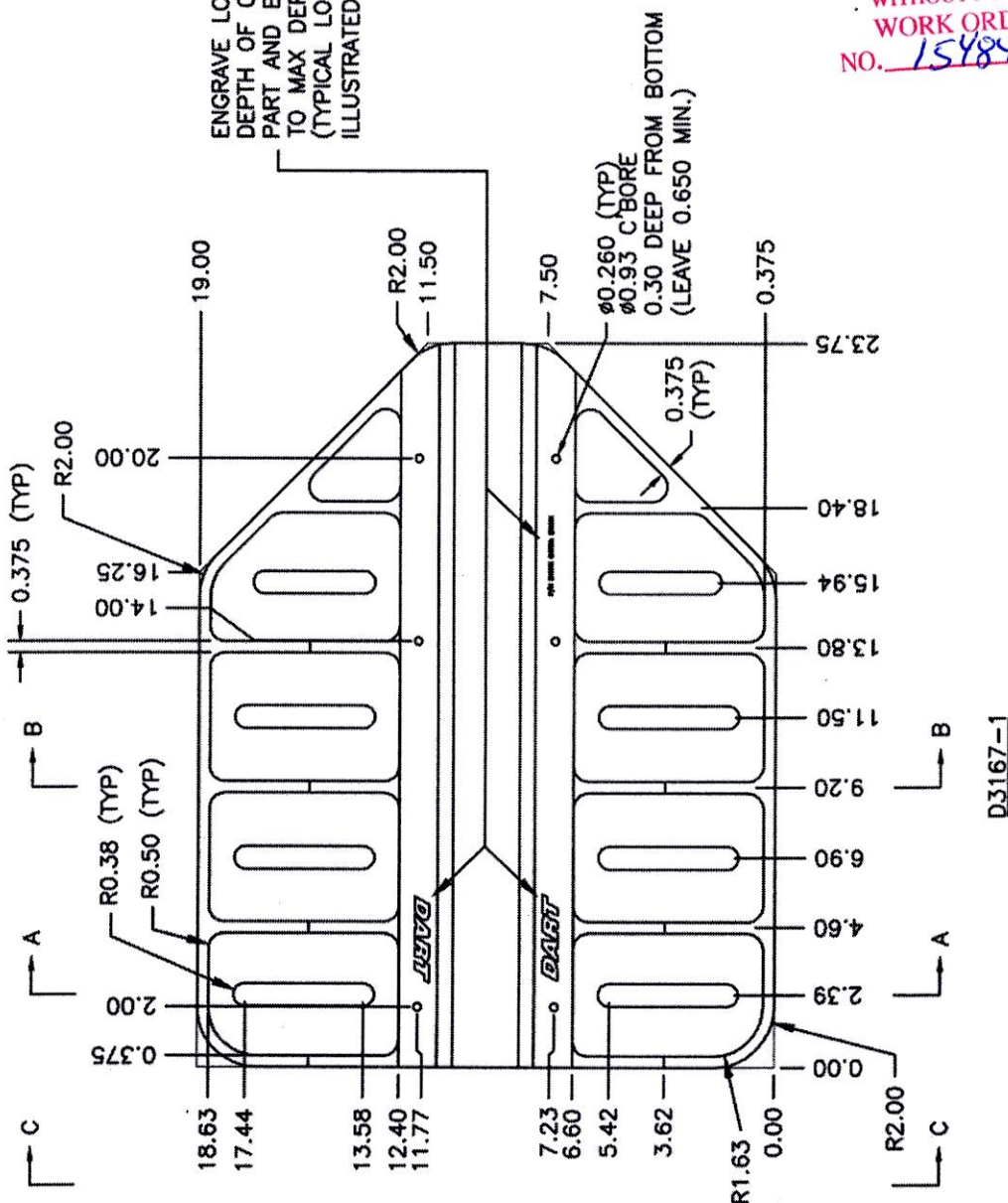
DESIGN 	DRAWN BY 	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED 	APPROVED 	DRAWING NO. D3167	REV. A SHEET 1 OF 2
DATE 02.10.08		TITLE BEARPAW	SCALE 1:6
A	02.10.08	NEW ISSUE	
AI	02.12.17	5.80 WAS 5.50	

RELEASED
02.10.25

ENGRAVE LOGO TO MAX
DEPTH OF 0.012. ENGRAVE
PART AND BATCH NUMBERS
TO MAX DEPTH OF 0.010.
(TYPICAL LOCATION AS
ILLUSTRATED)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 154848

VIC
16/12/22



MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689
1.00 THICK (MACHINE TO 0.950)
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

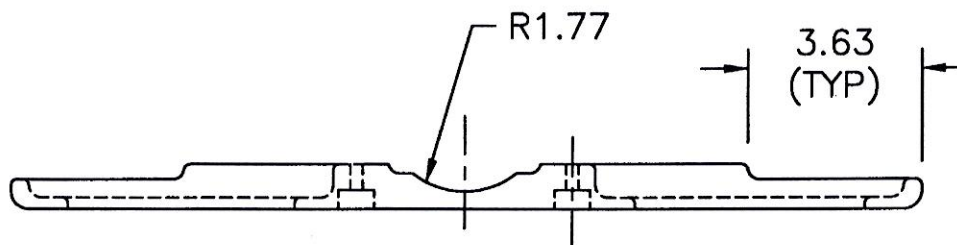
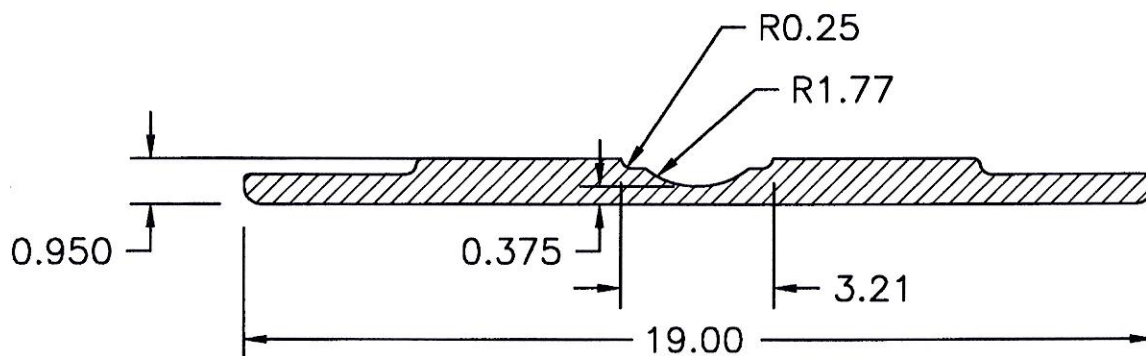
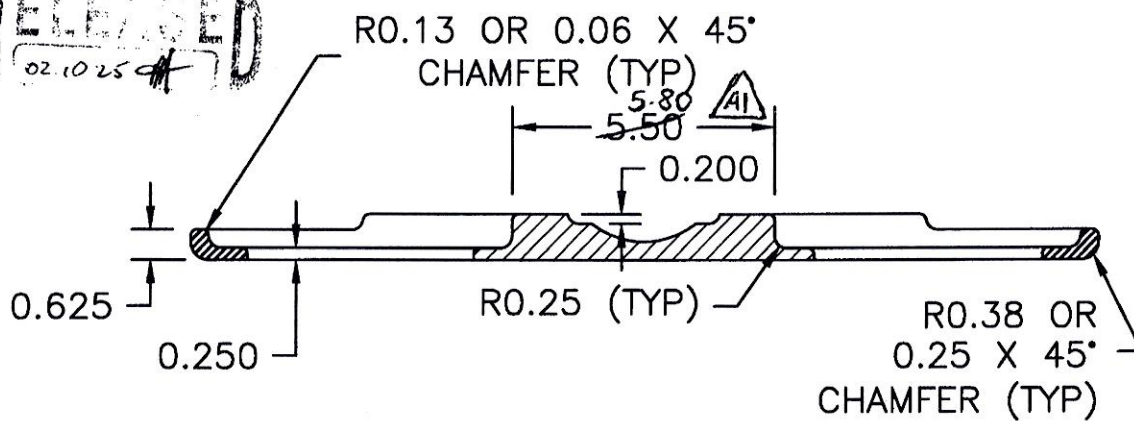
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					



DESIGN 	DRAWN BY 	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED 	APPROVED 	DRAWING NO. D3167	REV. A SHEET 2 OF 2
DATE 02.10.08		TITLE BEARPAW	SCALE 1:4

RELEASED
02.10.25



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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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